Biomarkers in chronic pelvic pain syndrome: did we find the Holy Grail?

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Editorial

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Fig. 1 Matterhorn, Zermatt, Switzerland (© Thomas M. Kessler).

The legend of the Holy Grail has fascinated people since the Middle Ages and is one of the most enduring in literature and art, from Chrétien de Troyes' *Li Contes del Graal*, Robert de Boron's *Joseph d' Arimathie*, Wolfram von Eschenbach's *Parzifal*, Sir Thomas Malory's *Le Morte Darthur*, Richard Wagner's *Parsifal, Monty Python and the Holy Grail*, Steven Spielberg's *Indiana Jones and the Last Crusade*, Terry Gilliam's *The Fisher King*, and Dan Brown's *The Da Vinci Code*. The Grail is most commonly identified as the cup used by Christ at the Last Supper and it is believed to have miraculous powers. The search for the Holy Grail symbolises a human longing for something we very much strive for but hardly achieve – such as elucidating underlying patho-mechanisms of chronic pain syndromes. . .

Chronic pelvic pain syndrome (CPPS) is one of the major challenges in urology. It is characterised by pain perceived in structures related to the pelvis for at least 6 months without confirmed infection or other obvious local pathology [1]. Although CPPS is highly prevalent, affects the lives of millions of people worldwide, and also imposes a substantial economic burden on every healthcare system, the cause of this syndrome is still unknown and available treatments often fail. An individualised, patient-tailored bio-psycho-social approach engaging the patient in a collaborative journey towards self-management is strongly recommended [1–4] (Fig. 1).

For the development of new therapies, we have to improve the understanding of the underlying causes of CPPS. In 2008, the National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK) of the National Institutes of Health (NIH) established the Multidisciplinary Approach to the Study of Chronic Pelvic Pain (MAPP) Research Network (www.mappnetwork.org), as a comprehensive whole-body initiative including research with clinical, epidemiological, and basic science expertise. The contribution of this research network to our current knowledge in the CPPS field is tremendous, mirrored by an impressive list of MAPP publications. In this month's issue of the *BJUI*, Dagher et al. [5] present the findings from the MAPP Research Network on biomarkers, which have been identified considering basic biochemistry and physiology of CPPS as a function of inflammation, dysregulation of extracellular matrix turnover, and vascular dysfunction: matrix metalloproteinase (MMP)-2, MMP-9, MMP-9/neutrophil gelatinase-associated lipocalin (NGAL) complex, NGAL, vascular endothelial growth factor (VEGF), VEGF receptor 1 (VEGF-R1). Although this study provides new insights into the pathophysiology, as several of these biomarkers were associated with the clinical symptoms of CPPS, no biomarker could usefully discriminate patients with CPPS from controls. It may be hypothesised that focusing on central aspects [4] instead of end organ abnormalities may be more appropriate. Indeed, neuro-imaging studies found cerebral correlates for CPPS, for instance, regional white matter abnormalities characterise CPPS and can distinguish between visceral diagnoses [6].

Nevertheless, although biomarkers, characterised as unique substances or features found in people with specific conditions that serve to identify the presence of a disorder, are promising, more research is urgently needed. CPPS is still a mystery! We have not yet found the Holy Grail, which may be covered by the glaciers' eternal ice - up to the Swiss Alps. . .

Conflict of Interest

No conflict of interest to disclose.

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